

REMARKS

This amendment is responsive to the Office Action mailed April 30, 2008 in connection with the above-identified patent application. Claim 40 has been amended. No new matter has been added.

35 U.S.C. § 103(a) Rejections

Claims 3, 7, 8, 13, 15, 19, 22, 24, 25 and 32-35 were rejected under 35 U.S.C. 103(a) as being unpatentable over Chiou et al. (U.S. Patent No. 6,700,093) in view of Penfold et al. (U.S. Patent No. 4,031,424).

Chiou et al. were deemed to disclose a dielectric discharge apparatus for the removal of perfluorocompound. The Examiner acknowledged that Chiou et al. do not teach specific values of applied voltage or the use of a wire or gap dimensions. The Examiner concluded that it would have been obvious to use a wire substrate, measure voltage and gap parameters, as taught by Penfold et al. in the Chiou et al. system.

Claims 4-6, 10-12, 16, 17 and 21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Chiou et al. and Penfold et al. and further in view of Stava (U.S. Patent No. 6,365,864).

The Examiner acknowledged that Chiou et al. and Penfold et al. do not teach frequency values. Stava was deemed to teach a wire cleaning apparatus in which the wire is within a tunnel and tube assembly, and a power supply which generates a frequency of 1 to 3 kHz and 100 to 300 kHz. The Examiner concluded that it would have been obvious to use a frequency of 1 to 3 or 100 to 300 kHz as taught by Stava in the Chiou et al. and Penfold et al. system.

Claims 26-31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Chiou et al. and Penfold et al. and further in view of Shiloh et al. (U.S. Patent No. 6,245,299).

The Examiner acknowledged that Chiou et al. and Penfold et al. do not teach a mirror or dimensions. Shiloh et al. were deemed to teach a barrier discharge device having a mirror component and cell widths, which are variable, ranging from several cm and down. The Examiner concluded that it would have been obvious to use a mirror

and dimensions taught by Shiloh et al. in the Chiou et al. and Penfold et al. system.

Claims 2, 9, 14, 18, 20, 23, 36-38, 40-46 and 144 were rejected under 35 U.S.C. 103(a) as being unpatentable over Chiou et al. and Penfold et al. and further in view of Nakamura et al. (U.S. Patent No. 6,489,585).

The Examiner acknowledged that Chiou et al. and Penfold et al. do not teach a dielectric barrier discharge plasma, the exact gases used or the exact frequency values. Nakamura et al. were deemed to disclose the dielectric barrier discharge plasma of a gas, which is used to clean substrates. The Examiner concluded that it would have been obvious to use a dielectric barrier discharge plasma of a gas and a frequency voltage as taught by Nakamura et al. in the Chiou et al. and Penfold et al. system.

The Finality of the Office Action is Premature

At least one claim was not amended in the reply to the Office Action dated October 31, 2007 in a manner that necessitated additional search or new grounds of rejection applied by the Examiner in the April 30, 2008 Final Office Action. For instance, the amendment to independent claim 24 made in response to the October 31, 2007 Office Action was made for clarification purposes, and did not necessitate new grounds of rejection, as evidenced by the Examiner's reiteration in the April 30, 2008 Office Action of the same grounds of rejection presented in the October 31, 2007 Office Action.

In the Office Action dated October 31, 2007, the Examiner rejected claims 2, 9-12, 14, 16-18, 20, 21, 23, 37, and 38 under §103(a) as being unpatentable over the combination of Chiou et al. (U.S. Patent No. 6,700,093) in view of Penfold et al. (U.S. Patent No. 4,031,424). None of these claims was amended in response to the October 31 2007 Office Action. However, in the present Office Action, the Examiner has introduced a new reference and grounds of rejection (Nakamura: U.S. Patent No. 6,489,585) in the rejections of claims 2, 9, 14, 18, 23, 37, and 38. Additionally, the Examiner has introduced a new reference and grounds of rejection (Stava: U.S. Patent No. 5,872,588) in the rejections of claims 10-12, 16, 17, and 21.

MPEP 706.07(a), second paragraph, states in part:

"Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p)." (Emphasis added.)

Since previously presented claims 2, 9-12, 14, 16-18, 20, 21, 23, 24, 37, and 38 were already searched by the examiner, and since the minor clarifying amendment to parent claim 24 did not necessitate new grounds of rejection, the new grounds of rejection introduced by the Examiner was *not* necessitated by applicants' amendment of the claims as required by MPEP 706.07(a). Accordingly, the finality of the Office Action dated April 30, 2008 is premature.

The Claims Distinguish Patentably over the References of Record

The Examiner has cited several references generally and without particularity with regard to the relevant portions thereof, leaving the Applicant in the untenable position of having to guess as to the Examiner's reasoning.

"In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes inventions other than that claimed by the application, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified." 37 CFR 1.104(c)(2).

A more particular citation to the portions of the references upon which the subject rejections are based is requested if the Examiner chooses to maintain these rejections.

Independent claim 24 sets forth a sealed *light-emitting cylindrical chamber* with a *transparent dielectric sleeve*. The examiner rejects these aspects, which incidentally the Examiner previously cited as a reason for the allowability of claim 24, by

citing the O-rings of Penfold. Specifically, the Examiner contends that the O-rings of Penfold disclose the claimed sealed chamber, and further makes a general assertion that "the very nature of electric discharge generation requires sealing (environmental isolation) at some point in the process," without citing any reference in support thereof. However, neither Penfold nor Chiou disclose a transparent dielectric sleeve in a sealed light-emitting chamber, as set forth in independent claim 24. Moreover, the fact that some gas mixtures at specific pressures, etc., can be stimulated to emit light would not motivate one to attempt to introduce a transparent dielectric sleeve and/or a sealed light-emitting chamber into the systems of Chiou and/or Penfold. Accordingly, neither Chiou nor Penfold, whether taken alone or in combination, make obvious independent claim 24.

Independent claim 40 has been amended herein to set forth that the dielectric sleeve in the sealed light-emitting chamber is transparent. This amendment should be entered in view of the premature finality of the current Office Action. Neither Chiou nor Penfold discloses a transparent dielectric sleeve in a light-emitting chamber. Moreover, the mere fact that electrical stimulation of certain gases can generate light would not have motivated one to employ a transparent dielectric sleeve in the apparatus of Chiou or Penfold. Accordingly, the cited references fail to render obvious independent claim 40.

Regarding the rejections of the remaining dependent claims, it is submitted that none of the other cited references overcomes the deficiencies of Chiou and Penfold with regard to a transparent dielectric sleeve or a light-emitting chamber.

In view of at least the foregoing, it is readily apparent that neither Chiou nor Penfold, alone or in combination, render obvious independent claims 24 and 40, and claims 2-23, 25-38, 41-46 and 144, dependent therefrom. Withdrawal of this rejection is respectfully requested.

CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (Claims 2-38, 40-46 and 144) are now in condition for allowance.

Respectfully submitted,

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